

OFFICE OF CLIMATE CHANGE, SUSTAINABILITY AND RESILIENCY  
**CITY AND COUNTY OF HONOLULU**

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KIRK CALDWELL  
MAYOR

JOSHUA W. STANBRO  
EXECUTIVE DIRECTOR &  
CHIEF RESILIENCE OFFICER

February 18, 2020

The Honorable Ron Menor, Chair  
and Members  
Committee on Zoning, Planning and Housing  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawai'i 96813

Dear Chair Menor and Councilmembers:

SUBJECT: Bill 25 (2019) – EV/PV Readiness Assumptions and Cost Estimates

Per your request, the Office of Climate Change, Sustainability and Resiliency ("CCSR") provides comments on Bill 25 (2019) cost estimates provided by a group of for-profit building industry stakeholders ("Industry"). In addition to this letter below, CCSR has also submitted a memo summarizing and substantiating CCSR's estimated costs of compliance for Bill 25, with estimates sourced and vetted by independent third-party entities; and most recently transmitted to the Zoning, Planning and Housing Committee ("ZPH") on February 14, 2020.<sup>1</sup>

In comparing the Industry and CCSR cost estimates, we note several differences. In certain cases, the Industry estimates appear to include costs that are explicitly not part of Bill 25, in other areas Industry estimated costs remain higher than independent estimates, and in addition there are certain costs attributed to Bill 25 that in fact were included at the request of Industry aimed at reducing compliance costs with code language adopted at the state level.

Overall, CCSR's range for various use cases to comply with the local amendments of the bill now ranges from \$200-\$3,200 whereas Industry estimates fall between \$1,900 to \$9,402 per housing unit. CCSR's cost estimates are based on independent figures that we have shared publicly, consistently used for our analysis, and updated regularly based on new information throughout our extensive stakeholder

<sup>1</sup> Refer to Memo dated February 14, 2020. See also:  
[http://www4.honolulu.gov/docushare/dsweb/Get/Document-250017/MM-011\(20\).pdf](http://www4.honolulu.gov/docushare/dsweb/Get/Document-250017/MM-011(20).pdf) and Attachment A:  
Detailed EV Readiness Cost Breakdown

outreach since January 2019.<sup>2</sup> We should note that the latest CCSR estimates expand upon our original estimates due to newly released independent research and the expansion of use cases for EV readiness to include indoor garages, curbside, and surface parking lot scenarios. We continuously review publications and reports for more information and remain open and willing to amend our numbers based on verifiable, transparent data regarding costs.

CCSR estimates the incremental overall cost impact of Bill 25 (2019) local amendments as follows:

Bill 25 Subsection	Cost Range per SF Home	Cost Range per MF Unit
C406.8 Electric Vehicle Infrastructure		\$459 - \$2,900
R404.2 Solar Conduit and Electric Panel Readiness	\$100 - \$300	\$100 - \$300
R404.3 Electric Vehicle Readiness	\$100 - \$300	
<b>Total</b>	<b>\$200-\$600</b>	<b>\$559 - \$3,200</b>

CCSR notes several differences in the Industry cost estimates (attached)<sup>3</sup> that may be explained with further context or original source data:

1. The Industry estimates appear to include multiple costs that are not generated by Bill 25 and are either being incurred already, or would be incurred regardless of its passage.
  - o R403.5.5 Solar Water Heating is independently mandated by State Law in HRS 196-6.5.
  - o Line items included from the 2012 International Energy Conservation ("IECC") and amendments in the State Energy Conservation Code ("SECC") are already in force due to state law and therefore should not be attributed to Bill 25.
2. If passed, the Administration's recommended CD2 amendments would actually *lower* several costs that Industry would face without Bill 25 including R402.1.3 Sampling and R403.6.2 Ceiling Fans (Exception). These amendments were included at the request of Industry stakeholders and specifically reduce costs and reduce complexity. CCSR does not believe this reduction in costs facilitated

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<sup>2</sup> Bill 25 (2019) was first heard by Full Council and referred to ZPH on July 3, 2019. For a copy of our presentation see here: [http://www4.honolulu.gov/docushare/dsweb/Get/Document-240055/MM-107\(19\).pdf](http://www4.honolulu.gov/docushare/dsweb/Get/Document-240055/MM-107(19).pdf)

<sup>3</sup> See Attachment B: Developer Cost Estimates 021220

by Bill 25 amendments should be characterized in Industry estimates as "additional cost."

3. CCSR has slightly adjusted upward our own estimates regarding PV/EV readiness to reflect better and more recent cost data. We are encouraged to see that the Industry's latest estimates for EV Readiness have decreased considerably from prior estimates submitted to Council and disseminated to the public. While CCSR and Industry cost estimates have clearly narrowed and progress has been made, Industry estimates remain higher than independent figures we have been able to source.
  - o Industry estimates remain approximately double (\$1,400 to \$4,500) relative to independent estimates (\$459 to \$2,900) for multifamily and commercial segments;
  - o Industry estimates include grid upgrade costs (e.g., for off-site transformers) that CCSR believes should be covered, fully or in part, by the utility (we appreciate the information from Industry and affordable housing providers on this topic that we can utilize for future policy engagement to help ensure these costs are properly distributed); and,
  - o Industry estimates differ considerably from prior \$5,050 (single family) and \$11,300 per unit (multi-family) estimates<sup>4</sup> without including a rationale, breakdown of costs, independent third-party data, or a clarification of calculations that would allow CCSR to fully analyze cost assumptions.

Additionally, it should be noted that CCSR and the City are supporting additional policies that can help offset costs to Industry. Bill 2 (2020) also under consideration at Council has the potential to profoundly lower overall unit costs and offset any incremental increase due to Bill 25. This is achieved by providing developers more flexibility to eliminate unnecessary parking stalls in many geographic areas, saving up to \$50,000 per unit by avoiding construction costs for parking stalls and further reducing the proportion of EV stalls required.

4. Industry has indicated that local labor costs should substantially increase CCSR and independent estimates. However, without more information this claim does not currently appear to be supported by data as the source material CCSR used to develop estimates is based on San Francisco, CA prevailing wages. San Francisco prevailing wages are similar to (and in some cases substantially higher) than local prevailing wages. For example, Electrician prevailing rates are \$62.87 to \$85.48 per hour for Hawai'i versus \$61.25 to \$120.67 per hour for San Francisco. Hawai'i Laborer rates are \$46.42 to \$60.52 per hour with fringe

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<sup>4</sup> See Attachment C: Developer Original Cost Estimates



The Honorable Ron Menor, Chair  
and Members  
February 18, 2020  
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benefits while CA Laborer rates range from \$46.23 to \$57.60 per hour with fringe benefits.<sup>5</sup> CCSR is open to adjusting cost based on additional information.

CCSR does not dispute that gaining energy efficiency and reducing the utility bills for local residents living in newly-constructed homes does require a small amount of additional cost to Industry when building living units. However, independent data and research (as well as the testimony of certain independent builders on O'ahu) indicate that these costs are smaller than the current numbers cited in Industry documents.

CCSR continues to engage in a robust conversation and share data with the stakeholders providing this information. We encourage interested parties to review the 3<sup>rd</sup> party, independent cost analyses that CCSR has provided to Council that ground our current estimations of Bill 25 cost impacts. We continue to strongly support passage of Councilmember Elefante's proposed Bill 25 (2019), CD2, which we believe strikes a balance between reducing dangerous (and ultimately expensive) carbon emission reductions as well as cost savings for residents on one hand, with the up-front increased building costs to developers on the other.<sup>6</sup>

Thank you for the opportunity to provide our analysis to Industry Bill 25 cost estimates. Should you have any questions, please contact me at (808) 768-2277 or [resilientoahu@honolulu.gov](mailto:resilientoahu@honolulu.gov).

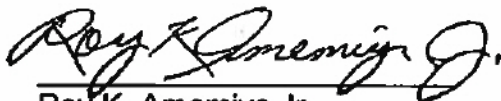
Sincerely,



Joshua Stanbro  
Executive Director and  
Chief Resilience Officer

Attachments

APPROVED:



Roy K. Amemiya Jr.  
Managing Director

<sup>5</sup> See Attachment D: Hawai'i Prevailing Wage Rates; Northern CA prevailing wages here: <https://www.dir.ca.gov/OPRL/2019-2/PWD/index.htm>; and in Attachment E: San Francisco Prevailing Wage Rates

<sup>6</sup> See CCSR testimony on the proposed Bill 25 (2019), CD2 here: [http://www4.honolulu.gov/docushare/dsweb/Get/Document-250120/MM-015\(20\).pdf](http://www4.honolulu.gov/docushare/dsweb/Get/Document-250120/MM-015(20).pdf)

## Appendix A: EV Readiness Cost Breakdown

		Level 2 Home		Level 2 Parking Garage		Level 2 Curb-side		DC Fast Charging		Description/Key Assumptions
		Min	Max	Min	Max	Min	Max	Min	Max	
Charging Station Hardware		\$450	\$1,000	\$1,500	\$2,500	\$1,500	\$3,000	\$12,000	\$35,000	
Electrician Materials		\$50	\$150	\$210	\$510	\$150	\$300	\$300	\$600	<ul style="list-style-type: none"> <li>\$1.50-2.50/ft for conduit and wire, plus misc other materials</li> <li>\$50-80/hr</li> <li>\$500-1000 if new breaker is required</li> <li>Assume 2x electrical cost for level 3</li> </ul>
Electrician Labor		\$100	\$350	\$1,240	\$2,940	\$800	\$1,500	\$1,600	\$3,000	
Other Materials				\$50	\$100	\$50	\$150	\$100	\$400	
Other Labor				\$250	\$750	\$2,500	\$7,500	\$5,000	\$15,000	<ul style="list-style-type: none"> <li>\$25-100/ft for trenching/boring- depends on surface, soil, and underground complexity</li> <li>Mounting, signage, protection and restoration also included here, but don't usually contribute more than a few hundred dollars.</li> </ul>
Transformer		N/A	N/A	N/A	N/A	N/A	N/A	\$10,000	\$25,000	<ul style="list-style-type: none"> <li>480V transformer installed by utility</li> </ul>
Mobilization		\$50	\$200	\$250	\$500	\$250	\$500	\$600	\$1,200	<ul style="list-style-type: none"> <li>Home: 1-3 hours of electrician time for a home installation</li> <li>Public: \$250-500 of time for 1-2 electricians and other labor. We found that the work could usually be completed in a single visit from each contractor.</li> </ul>
Permitting		\$0	\$100	\$50	\$200	\$50	\$200	\$50	\$200	<ul style="list-style-type: none"> <li>Varies from city to city, often a flat fee for one or several stations</li> </ul>
Total Retrofit Cost including EVSE (Charger)		\$650	\$1,800	\$3,550	\$7,500	\$5,300	\$13,150	\$29,650	\$80,400	
Adjusted for EV-Ready New Construction										
-- Less Charging Station Hardware		\$150	\$600	\$1,800	\$4,500	\$3,550	\$9,650	\$17,050	\$44,200	
-- Reduced Labor-related costs	90%			\$459	\$1,179	\$580	\$1,550	\$11,110	\$28,000	
-- Reduced Labor-related costs	75%			\$683	\$1,733	\$1,075	\$2,900			
Range of Level 2 EV Readiness				\$459			\$2,900			

Source: RMI sourced through Ohm Home at <https://www.ohmhome.com/electric-vehicles/ev-charging-station-cost/>

## Attachment B

**Bill 25 - Estimated Costs**

2/12/2020

Based on CD2 (Elefante) with Hand Carry Amendment (Elefante) as presented at 1/23/2020 Zoning, Planning and Housing Committee Hearing.

Bill 25 - Subsection	Cost Range per SF Home	Cost Range per MF Unit	Comment
C206.8 Electric Vehicle Infrastructure		\$1,400 - \$1,500	Multi-family - Underground Infrastructure. Based on engineer's estimate of 120 unit condo project.
		\$0 - \$3,000	Multi-family - Upgrades to transformers and electrical infrastructure. This cost is project specific and determine by HECO during the design phase of the project. It could require no additional transformers or it could require a doubling of transformers. Transformers cost between \$30,000 - \$40,000 each. The 120 unit condo project has 9 transformers without EV requirements.
R403.5.5 Solar Water Heating	\$4,550 - \$7,502		Cost difference between a solar hot water system vs an instant gas water heater. Based on subcontractor bid pricing.
R404.2 Solar Conduit and Electrical Panel Readiness		\$250 - \$500	Multi-family - building infrastructure (including required fire stopping).
	\$350 - \$500		Single Family - house Infrastructure.
R404.3 Electric Vehicle Readiness	\$350 - \$500		Single Family - house infrastructure.
R402.1.3 Sampling	\$100 - \$300	\$100 - \$300	Depends on # of plan/bldg types and # of each type. Note: additional cost is reduced since the State Energy Code requires testing for all homes.
R403.6.2 Ceiling Fans (Exception)	\$150 - \$600	\$150 - \$600	Addition/upgrade to 3-wire fan junction boxes. Note: additional cost is reduced since the State Energy Code requires the installation of ceiling fans for all homes.
Bill 25 - Total Estimated Cost Range	\$5,500 - \$9,402	\$1,900 - \$5,900	

**IECC + SECC - Estimate Costs**

Based on 2012 IECC + SECC Approved Amendments.

Subsection	Cost Range per SF Home	Cost Range per MF Unit	Comment
SECC - R402.3.2 Glazed Fenestration SHGC	\$200	\$175	Upgrade from SHGC 0.30 to 0.25.
IECC - R402.4 Air Leakage	\$1,000 - \$7,000	\$1,000 - \$3,000	Upgrade building thermal envelope.
IECC - R403.6 Mechanical Ventilation	\$1,400	\$850	Upgrade bathroom exhaust fans.
IECC - R404.1 Lighting Equipment	\$700	\$280	Upgrade to all LED Lighting Fixtures.
IECC - Total Estimated Cost Range	\$3,300 - \$9,300	\$2,305 - \$4,305	
IECC + SECC + Bill 25 - Total Estimate Cost Range	\$8,800 - \$18,702	\$4,205 - \$10,205	

**BILL 25 CD1 (2019) ENERGY CODE PROPOSED AMENDMENTS - ESTIMATED INCREASED COST IMPACTS ON HOUSING\***

Based on approximately 4,400 Single Family and Duplex Units (SF) , 8,750 Multi-Family Units (MF) and 3,350 Affordable Rental Units (AR)

	Add'l Cost Per Unit	
<b>ESTIMATED INCREASED COST IMPACTS (MANDATES)</b>		
Single Family/Duplex Units/Affordable For Sale	\$ 26,617.00	
Multi-Family/Affordable Rental Units	\$21,705.00	

Unit Type	Add'l Cost Per Unit	State Energy Conservation Code ("SECC") Comments
Single Family/Duplex Units/Affordable For Sale	\$ 6,995.00	Do we really need "airtight homes" on Oahu?
Multi-Family and Affordable Rental	\$ 6,100.00	Is this a Mainland LEED requirement?

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale	\$ 1,400.00	Two speed bathroom fans, always on @ 50 cfm ramps up to 80 cfm when lights are turned on.
Multi-Family and Affordable Rental	\$ 850.00	

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale	\$ 200.00	Cost to change from SHGC of .30 to SHGC of .25
Multi-Family and Affordable Rental	\$ 175.00	

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale	\$ 4,772.00	Additional insulation wrap to cover steel framing studs on exterior walls of home.
Multi-Family and Affordable Rental	\$ 3,000.00	

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale (25 yrs)	\$ 7,500.00	\$2,500 GWH: \$2,500 (25-yr warranty)
Multi-Family and Affordable Rental (25 yrs)	\$ -	\$10,000 SWH (10-13yr warranty)
		\$12,500 SWH ANNUAL MAINTENANCE (\$500/yr x 25yr)

**LED LIGHT FIXTURES (SECC)**

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale	\$ 700.00	Cost difference to go all LED. Note that LED fixtures have no bulbs to replace, the whole fixture must be replaced.
Multi-Family and Affordable Rental	\$ 280.00	

Unit Type	Add'l Cost Per Unit	Comments
Single Family/Duplex Units/Affordable For Sale	\$ 5,050.00	Infrastructure upgrade plus outlet in garage; Infrastructure upgrade, plus underground work to open parking lots. CHARGERS NOT INCLUDED.*
Multi-Family and Affordable Rental	\$ 11,300.00	Infrastructure upgrade plus underground work to open parking lots. CHARGERS NOT INCLUDED.*

\* Based on quotes from contractors for housing projects

\*\*Note: Electrical transformers may need to be upgraded due to charging station requirements. It is assumed that homeowners will charge EVs during peak afternoon/evening hours & high demand/rates. Also, electric meters or some way of securing chargers will need to be added, which is not included in this cost estimate.



State of Hawai'i  
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS  
Princess Ruth Ke'elikolani Building  
830 Punchbowl Street  
Honolulu, Hawai'i 96813

February 17, 2020  
WAGE RATE SCHEDULE BULLETIN NO. 497

This schedule of wage rates contained herein is recognized by the Director of Labor and Industrial Relations to be prevailing on public construction work for the purposes of Chapter 104, Hawai'i Revised Statutes. The schedule of wage rates determines the applicable wage determination for each classification and does not impose any staffing requirements for any classification. The schedule of wage rates is applicable only to those laborers and mechanics employed at the site of work.

As required by law, future wage rates for laborers and mechanics are incorporated into this bulletin based on available information and are subject to change. Whenever the Director determines that the prevailing wage has increased as shown in the wage rate schedule, the contractor must increase the wages accordingly during the performance of the contract. For addenda or additional wage rate schedules, please consult the Internet at <http://labor.hawaii.gov/rs>.

The Apprentice Schedule is available on the Internet or upon request from the Research and Statistics Office. Pursuant to Section 12-22-6 (1), Hawai'i Administrative Rules, the Apprentice Schedule is applicable only to apprentices who are parties to apprenticeship agreements registered with or recognized by the Department of Labor and Industrial Relations.

Questions on the schedule should be referred to the Research and Statistics Office at (808) 586-9005.

The next regular schedule will be issued on or about September 15, 2020.

SCOTT T. MURAKAMI  
Director



STATE OF HAWAII  
DAVID Y. IGE, Governor

DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS  
SCOTT T. MURAKAMI, Director  
ANNE EUSTAQUIO, Deputy Director

RESEARCH AND STATISTICS OFFICE  
PHYLLIS DAYAO, Research & Statistics Officer

OPERATIONS MANAGEMENT INFORMATION STAFF  
Janet Kaya, Supervisor  
Elienne Yoshida, Research Statistician

In cooperation with:  
WAGE STANDARDS DIVISION  
SHERYL LEE, Administrator

WAGE RATE SCHEDULE BULLETIN NO. 497

Classification	Current			2020			2021			2022			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>ASPHALT PAVING GROUP:</b>	<b>9/16/19</b>												
Asphalt Concrete Material Transfer	\$76.29	\$44.42	\$33.87	-	-	-	-	-	-	-	-	-	13
Asphalt Raker	\$77.33	\$43.46	\$33.87	-	-	-	-	-	-	-	-	-	13
Asphalt Spreader Operator	\$78.61	\$44.94	\$33.87	-	-	-	-	-	-	-	-	-	13
Laborer, Hand Roller	\$74.56	\$40.69	\$33.87	-	-	-	-	-	-	-	-	-	13
Roller Operator (5 tons and under)	\$77.06	\$43.19	\$33.87	-	-	-	-	-	-	-	-	-	13
Roller Operator (over 5 tons)	\$78.49	\$44.62	\$33.87	-	-	-	-	-	-	-	-	-	13
Screed Person	\$76.29	\$44.42	\$33.87	-	-	-	-	-	-	-	-	-	13
<b>EQUIPMENT OPERATOR:</b>													
Combination Loader/Backhoe (over 3/4 cu. yd.)	\$77.33	\$43.46	\$33.87	-	-	-	-	-	-	-	-	-	13
Combination Loader/Backhoe (up to 3/4 cu. yd.)	\$76.35	\$42.48	\$33.87	-	-	-	-	-	-	-	-	-	13
Concrete saws and/or Grinder (self-propelled unit on streets, highways, airports and canals)	\$78.29	\$44.42	\$33.87	-	-	-	-	-	-	-	-	-	13
Grader, Soil Stabilizer, Cold Planer	\$79.12	\$45.25	\$33.87	-	-	-	-	-	-	-	-	-	13
Loader (2-1/2 cu. yds. and under)	\$76.29	\$44.42	\$33.87	-	-	-	-	-	-	-	-	-	13
Loader (over 2-1/2 cu. yds. to and including 5 cu. yds.)	\$76.61	\$44.74	\$33.87	-	-	-	-	-	-	-	-	-	13
<b>TRUCK DRIVER:</b>													
Assistant to Engineer	\$77.06	\$43.19	\$33.87	-	-	-	-	-	-	-	-	-	13
Oil Tanker (double), Hot Liquid Asphalt Tanker	\$78.61	\$44.74	\$33.87	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Semi-Dump, Asphalt Distributor	\$76.29	\$44.42	\$33.87	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$76.61	\$44.74	\$33.87	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (8 cu. yds. & under, water level)	\$77.33	\$43.46	\$33.87	-	-	-	-	-	-	-	-	-	13
Single or Rock Cans Tandem Dump Truck (over 8 cu. yds., water level)	\$77.64	\$43.77	\$33.87	-	-	-	-	-	-	-	-	-	13
Tractor Trailer (hauling equipment)	\$76.72	\$44.85	\$33.87	-	-	-	-	-	-	-	-	-	13
Utility, Flatbed	\$77.06	\$43.19	\$33.87	-	-	-	-	-	-	-	-	-	13
<b>* BOILERMAKER</b>	<b>2/17/20</b>												
	\$67.56	\$36.29	\$31.29	-	-	-	-	-	-	-	-	-	13
<b>* CARPENTER:</b>	<b>2/17/20</b>			<b>8/31/20</b>			<b>8/30/21</b>			<b>8/5/22</b>			
Carpenter, Patent Scaffold Erector (14 feet and over); Piledriver, Pneumatic Nailer	\$72.40	\$49.95	\$22.45	\$73.84	\$50.50	\$23.34	\$75.59	\$51.25	\$24.34	\$77.34	\$52.00	\$25.34	1,12,13
Millwright	\$72.65	\$50.20	\$22.45	\$74.09	\$50.75	\$23.34	\$75.84	\$51.50	\$24.34	\$77.59	\$52.25	\$25.34	1,12,13
Power Saw Operator (2 h.p. & above)	\$72.55	\$50.10	\$22.45	\$73.99	\$50.65	\$23.34	\$75.74	\$51.40	\$24.34	\$77.49	\$52.15	\$25.34	1,12,13
<b>CEMENT FINISHER:</b>	<b>9/16/19</b>			<b>8/31/20</b>			<b>8/30/21</b>			<b>8/5/22</b>			
Cement Finisher; Curb Setter; Precast Panel Setter; Manhole Builder	\$71.78	\$41.10	\$30.68	\$73.63	\$42.10	\$31.53	\$74.98	\$42.60	\$32.38	\$76.46	\$43.33	\$33.13	2,12,13
Trowel Machine Operator	\$71.93	\$41.25	\$30.68	\$73.78	\$42.25	\$31.53	\$75.13	\$42.75	\$32.38	\$76.61	\$43.48	\$33.13	2,12,13
<b>* CHAIN-LINK FENCE ERECTOR (Note: 2 increases for 2020)</b>	<b>2/17/20</b>			<b>10/4/20</b>			<b>10/3/21</b>			<b>10/2/22</b>			
	\$40.60	\$24.75	\$15.85	\$42.45	\$25.50	\$16.95	\$43.90	\$26.25	\$17.85	\$45.35	\$27.00	\$18.35	10,13
<b>CHLORINATOR</b>	<b>9/16/19</b>												
	\$28.84	\$28.84	-	-	-	-	-	-	-	-	-	-	

WAGE RATE SCHEDULE BULLETIN NO. 497

Classification	Current			2020			2021			2022			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>DIVER:</b>	9/16/19												
Diver (Aqua Lung) (Scuba) - Up to a depth of 30 feet	\$91.44	\$58.13	\$33.31	-	-	-	-	-	-	-	-	-	13
Diver (Aqua Lung) (Scuba) - Over a depth of 30 feet	\$100.81	\$67.50	\$33.31	-	-	-	-	-	-	-	-	-	13
Stand-By Diver (Aqua Lung) (Scuba)	\$82.06	\$48.75	\$33.31	-	-	-	-	-	-	-	-	-	13
Diver (Other than Aqua Lung)	\$100.81	\$67.50	\$33.31	-	-	-	-	-	-	-	-	-	3,13
Stand-By Diver (Other than Aqua Lung)	\$82.06	\$48.75	\$33.31	-	-	-	-	-	-	-	-	-	3,13
Tender (Other than Aqua Lung)	\$79.03	\$45.72	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>DRAPERY INSTALLER</b>	9/16/19												
	\$33.11	\$31.00	\$2.11	-	-	-	-	-	-	-	-	-	
<b>* DRYWALL INSTALLER</b>	2/17/20			8/31/20			8/30/21			9/6/22			
	\$72.85	\$50.20	\$22.45	\$74.08	\$50.75	\$23.34	\$75.84	\$51.50	\$24.34	\$77.59	\$52.25	\$25.34	12,13
<b>* DRYWALL TAPERS/FINISHERS</b>	2/17/20						1/3/21			1/2/22			
	\$72.75	\$43.10	\$29.65	-	-	-	\$74.75	\$43.10	\$31.65	\$76.50	\$43.85	\$32.65	
<b>ELECTRICIAN</b>	8/25/19			2/23/20									
Cable Splicer (inside/outside)	\$85.48	\$55.88	\$29.60	\$86.17	\$56.43	\$29.74	-	-	-	-	-	-	4,13
Ground Worker (outside)	\$82.87	\$38.10	\$24.77	\$83.38	\$38.48	\$24.88	-	-	-	-	-	-	4,13
Heavy Equipment Operator (outside)	\$72.56	\$45.72	\$26.84	\$73.13	\$46.17	\$26.96	-	-	-	-	-	-	4,13
Line Installer (outside); Wire Installer (inside)	\$79.01	\$50.80	\$28.21	\$79.66	\$51.30	\$28.36	-	-	-	-	-	-	4,13
<b>Telecommunication Worker</b>	8/25/19			8/23/20			8/22/21			8/21/22			
Licensed Technician	\$44.18	\$31.69	\$12.49	\$45.65	\$32.69	\$12.96	\$46.82	\$33.69	\$13.13	\$48.63	\$34.94	\$13.69	13
Technician I / Splicer	\$42.32	\$30.11	\$12.21	\$43.74	\$31.06	\$12.68	\$44.85	\$32.01	\$12.84	\$46.57	\$33.19	\$13.38	13
<b>* ELEVATOR CONSTRUCTOR MECHANIC</b>	2/17/20												
	\$95.905	\$61.14	\$34.765				-	-	-	-	-	-	13
<b>EQUIPMENT OPERATOR:</b>	9/16/19												
Group 1	\$76.75	\$43.44	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 2	\$76.86	\$43.55	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 3	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 4	\$77.30	\$43.99	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 5	\$77.61	\$44.30	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 6	\$78.26	\$44.95	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 7	\$78.58	\$45.27	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 8	\$78.69	\$45.38	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 9	\$78.80	\$45.49	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 9A	\$79.03	\$45.72	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 10	\$79.09	\$45.78	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 10A	\$79.24	\$45.93	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 11	\$79.39	\$46.08	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 12	\$79.75	\$46.44	\$33.31	-	-	-	-	-	-	-	-	-	5,13
Group 12A	\$80.11	\$46.80	\$33.31	-	-	-	-	-	-	-	-	-	5,13

WAGE RATE SCHEDULE BULLETIN NO. 497

Classification	Current			2020			2021			2022			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>FENCE ERECTOR (CHAIN-LINK TYPE)</b>													
See Chain-Link Fence Erector	-	-	-	-	-	-	-	-	-	-	-	-	
<b>FLOOR LAYER (CARPET, LINOLEUM &amp; SOFT TILE)</b>	9/16/19			3/1/20			2/28/21			2/27/22			
	\$65.46	\$35.40	\$30.06	\$67.70	\$36.65	\$31.05	\$69.69	\$37.90	\$31.79	\$71.93	\$39.15	\$32.78	13
<b>GLAZIER</b>	9/16/19												
	\$72.25	\$39.00	\$33.25	-	-	-	-	-	-	-	-	-	6,13
<b>HELICOPTER WORK:</b>	9/16/19												
Airborne Hoist Operator	\$80.61	\$47.30	\$33.31	-	-	-	-	-	-	-	-	-	13
Co-Pilot	\$80.75	\$47.44	\$33.31	-	-	-	-	-	-	-	-	-	13
Pilot	\$80.92	\$47.61	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>INSULATOR</b>	2/17/20			8/30/20									
	\$66.15	\$40.90	\$25.25	\$67.55	\$41.90	\$25.65	-	-	-	-	-	-	7,13
<b>IRONWORKER:</b>	9/16/19			9/1/20			9/1/21						
Reinforcing, Structural	\$76.55	\$41.50	\$35.05	\$76.55	\$41.50	\$35.05	\$76.55	\$41.50	\$35.05	-	-	-	8,13
<b>LABORER:</b>	9/16/19			8/31/20			8/30/21			9/5/22			
Driller	\$60.52	\$39.05	\$21.47	\$62.38	\$39.70	\$22.68	\$63.84	\$40.35	\$23.49	\$65.25	\$41.00	\$24.25	1,13
Gunit Operator or Shotcrete Operator	\$60.02	\$38.55	\$21.47	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	1,13
High Scaler (Working Suspended)	\$60.02	\$38.55	\$21.47	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	13
Laborer I	\$59.52	\$38.05	\$21.47	\$61.38	\$38.70	\$22.68	\$62.84	\$39.35	\$23.49	\$64.25	\$40.00	\$24.25	1,13
Laborer II	\$56.92	\$35.45	\$21.47	\$58.78	\$36.10	\$22.68	\$60.24	\$38.75	\$23.49	\$61.65	\$37.40	\$24.25	1,13
Light/Final Clean-up (Janitorial) Laborer	\$46.42	\$29.25	\$17.17	\$47.82	\$29.65	\$18.17	\$48.92	\$30.05	\$18.87	\$50.02	\$30.45	\$19.57	1,13
Mason Tender/Hod Carrier	\$60.02	\$38.55	\$21.47	\$61.88	\$39.20	\$22.68	\$63.34	\$39.85	\$23.49	\$64.75	\$40.50	\$24.25	1,13
Powder Blaster	\$60.52	\$39.05	\$21.47	\$62.38	\$39.70	\$22.68	\$63.84	\$40.35	\$23.49	\$65.25	\$41.00	\$24.25	1,13
Window Washer (Outside) (On bosun's chair, cable-suspended scaffold or work platform)	\$59.02	\$37.55	\$21.47	\$60.88	\$38.20	\$22.68	\$62.34	\$38.85	\$23.49	\$63.75	\$39.50	\$24.25	13
<b>LANDSCAPER:</b>	9/2/19												
Landscape & Irrigation Laborer A	\$39.60	\$26.15	\$13.45	-	-	-	-	-	-	-	-	-	
Landscape & Irrigation Laborer B	\$40.60	\$27.15	\$13.45	-	-	-	-	-	-	-	-	-	
Landscape & Irrigation Maintenance Laborer	\$35.00	\$21.55	\$13.45	-	-	-	-	-	-	-	-	-	
<b>LATHER</b>	2/17/20			8/31/20			8/30/21			9/5/22			
	\$72.65	\$50.20	\$22.45	\$74.09	\$50.75	\$23.34	\$75.84	\$51.50	\$24.34	\$77.59	\$52.25	\$25.34	12,13
<b>MASON; Bricklayer;</b>	9/16/19			8/31/20			8/30/21			9/5/22			
Cement Blocklayer; Stone Mason; Precast Sill Setter	\$72.93	\$44.96	\$27.97	\$74.79	\$45.96	\$28.83	\$76.14	\$46.46	\$29.68	\$77.67	\$47.24	\$30.43	2,12,13
Pointer-Caulker-Weatherproofer	\$73.18	\$45.21	\$27.97	\$75.04	\$46.21	\$28.83	\$76.39	\$46.71	\$29.68	\$77.92	\$47.49	\$30.43	2,12,13
<b>PAINTER: (Note: 2 increases for 2020 &amp; 2021)</b>	2/17/20			7/1/20			1/1/21						
Painter; Spray Painter; Sandblaster or Waterblaster; Thermoplastic Striper; Paper Hanger	\$68.99	\$38.90	\$30.09	\$68.99	\$38.90	\$30.09	\$68.99	\$38.90	\$30.09	-	-	-	12
Painter; Spray Painter; Sandblaster or Waterblaster Thermoplastic Striper; Paper Hanger	-	-	-	-	-	-	\$68.99	\$38.90	\$30.09	-	-	-	12

WAGE RATE SCHEDULE BULLETIN NO. 497

Classification	Current			2020			2021			2022			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>PLASTERER:</b>	9/16/19			8/31/20			8/30/21			9/5/22			
	\$73.32	\$42.64	\$30.68	\$75.22	\$43.69	\$31.53	\$76.59	\$44.21	\$32.38	\$78.13	\$45.00	\$33.13	2,12,13
<b>PLUMBER:</b> (Note: 2 increases for 2020)	2/17/20			7/5/20			1/3/21						
Plumber; Pipefitter; Refrigeration Fitter; Heating & Air Conditioning Fitter; Sprinkler Fitter; Steamfitter	\$71.73	\$44.35	\$27.38	\$72.48	\$44.85	\$27.63	\$73.60	\$45.35	\$28.25	-	-	-	9,13
<b>ROOFER:</b>	9/16/19			9/5/20			9/5/21						
Shingle, Tile, Built-up Roofing	\$60.10	\$41.15	\$18.85	\$60.85	\$41.80	\$19.05	\$61.70	\$42.55	\$19.15	-	-	-	12
Coal Tar Pitch	\$101.25	\$82.30	\$18.95	\$102.65	\$83.60	\$19.05	\$104.25	\$85.10	\$19.15	-	-	-	
<b>SANDBLASTER OR WATERBLASTER:</b>													
Use wages of craft to which sand or water blasting is incidental.													
<b>SHEETMETAL WORKER:</b>	9/1/19												
	\$71.23	\$43.13	\$28.10	-	-	-	-	-	-	-	-	-	13
<b>TERMITE TREATER</b>	9/16/19												
	\$20.53	\$18.60	\$1.93	-	-	-	-	-	-	-	-	-	
<b>TERRAZZO:</b>	2/17/20			8/31/20			8/31/21			9/5/22			
Terrazzo Setter	\$72.72	\$42.60	\$30.12	\$74.47	\$43.50	\$30.97	\$76.22	\$44.40	\$31.82	\$77.80	\$45.30	\$32.50	2,13
Terrazzo Base Grinder	\$70.91	\$40.79	\$30.12	\$72.66	\$41.69	\$30.97	\$74.41	\$42.59	\$31.82	\$75.99	\$43.49	\$32.50	2,13
Certified Terrazzo Floor Grinder and Tender	\$69.36	\$38.24	\$30.12	\$71.11	\$40.14	\$30.97	\$72.86	\$41.04	\$31.82	\$74.44	\$41.94	\$32.50	2,13
Terrazzo Floor Grinder	\$66.36	\$36.24	\$30.12	\$68.11	\$37.14	\$30.97	\$69.86	\$38.04	\$31.82	\$71.44	\$38.94	\$32.50	2,13
<b>TILE SETTER:</b>	2/17/20			8/31/20			8/30/21			9/5/22			
Ceramic Hard Tile; Marble Setter	\$72.72	\$42.60	\$30.12	\$74.47	\$43.50	\$30.97	\$76.22	\$44.40	\$31.82	\$77.80	\$45.30	\$32.50	2,13
Certified Ceramic Tile & Marble Helper	\$69.36	\$39.24	\$30.12	\$71.11	\$40.14	\$30.97	\$72.86	\$41.04	\$31.82	\$74.44	\$41.94	\$32.50	2,13
<b>TRUCK DRIVER:</b>	9/16/19												
Concrete Mixer	\$38.37	\$30.95	\$5.42	-	-	-	-	-	-	-	-	-	
Concrete Mixer/Booster	\$48.63	\$34.53	\$14.10	-	-	-	-	-	-	-	-	-	
Dump Truck, 8 cu. yds. & under (water level);													
Water Truck (up to & including 2,000 gallons)	\$77.30	\$43.99	\$33.31	-	-	-	-	-	-	-	-	-	13
Flatbed, Utility, etc.	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	13
End Dump, Unlicensed (Euclid, Mack, Caterpillar, or similar); Tractor Trailer (hauling equipment)	\$78.69	\$45.38	\$33.31	-	-	-	-	-	-	-	-	-	13
Semi-Trailer, Rock Cans, or Semi-Dump	\$78.26	\$44.95	\$33.31	-	-	-	-	-	-	-	-	-	13
Slip-in or Pup	\$78.58	\$45.27	\$33.31	-	-	-	-	-	-	-	-	-	13
Tandem Dump Truck, over 8 cu. yds. (water level);													
Water Truck (over 2,000 gallons)	\$77.61	\$44.30	\$33.31	-	-	-	-	-	-	-	-	-	13



## WAGE RATE SCHEDULE BULLETIN NO. 487

Classification	Current			2020			2021			2022			Remarks See Pg 6-8
	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	Prevailing Wage Total	Basic Hourly Rate	Fringe Hourly Rate	
<b>UNDERGROUND LABORER:</b>	9/16/19			8/31/20			8/30/21			9/5/22			
Worker in a raise, shaft, or tunnel.													
Group 1	\$60.12	\$38.65	\$21.47	\$61.98	\$39.30	\$22.68	\$63.44	\$39.95	\$23.49	\$64.85	\$40.60	\$24.25	13
Group 2	\$61.62	\$40.15	\$21.47	\$63.48	\$40.80	\$22.68	\$64.94	\$41.45	\$23.49	\$66.35	\$42.10	\$24.25	13
Group 3	\$62.12	\$40.65	\$21.47	\$63.98	\$41.30	\$22.68	\$65.44	\$41.95	\$23.49	\$66.85	\$42.60	\$24.25	13
Group 4	\$63.12	\$41.65	\$21.47	\$64.98	\$42.30	\$22.68	\$66.44	\$42.95	\$23.49	\$67.85	\$43.60	\$24.25	13
Group 5	\$63.37	\$41.90	\$21.47	\$65.23	\$42.55	\$22.68	\$66.69	\$43.20	\$23.49	\$68.10	\$43.85	\$24.25	13
Group 6	\$63.47	\$42.00	\$21.47	\$65.33	\$42.65	\$22.68	\$66.79	\$43.30	\$23.49	\$68.20	\$43.95	\$24.25	13
Group 7	\$63.72	\$42.25	\$21.47	\$65.58	\$42.90	\$22.68	\$67.04	\$43.55	\$23.49	\$68.45	\$44.20	\$24.25	13
Group 8	\$64.17	\$42.70	\$21.47	\$66.03	\$43.35	\$22.68	\$67.49	\$44.00	\$23.49	\$68.90	\$44.65	\$24.25	13
<b>WATER FRONT CONSTRUCTION (DREDGING):</b>	9/16/19												
<b>CLAMSHELL OR DIPPER DREDGES:</b>													
Clamshell or Dipper Operator	\$79.75	\$46.44	\$33.31	-	-	-	-	-	-	-	-	-	11,13
Mechanic; Welder; Watch Engineer	\$79.09	\$45.78	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate; Barge mate	\$78.69	\$45.38	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand; Barge Worker	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>HYDRAULIC SUCTION DREDGES:</b>													
Lever Operator	\$79.39	\$46.08	\$33.31	-	-	-	-	-	-	-	-	-	13
Mechanic; Welder	\$79.09	\$45.78	\$33.31	-	-	-	-	-	-	-	-	-	13
Watch Engineer (steam or electric)	\$79.24	\$45.93	\$33.31	-	-	-	-	-	-	-	-	-	13
Dozer Operator	\$78.03	\$45.72	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate	\$78.69	\$45.38	\$33.31	-	-	-	-	-	-	-	-	-	13
Winch Operator (stern winch on dredge)	\$78.58	\$45.27	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand (can operate anchor scow under direction of deckmate); Levee Operator	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>DERRICKS:</b>													
Operator; Derrick, Piledriver, Crane	\$79.75	\$46.44	\$33.31	-	-	-	-	-	-	-	-	-	13
Deckmate; Saurman Type Dragline (up to & including 5 yds.)	\$78.69	\$45.38	\$33.31	-	-	-	-	-	-	-	-	-	13
Saurman Type Dragline (over 5 cu. yds.)	\$78.09	\$45.78	\$33.31	-	-	-	-	-	-	-	-	-	13
Fire Person; Oiler; Deckhand	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>BOAT OPERATORS:</b>													
Master Boat Operator	\$79.39	\$46.08	\$33.31	-	-	-	-	-	-	-	-	-	13
Boat Operator	\$79.24	\$45.93	\$33.31	-	-	-	-	-	-	-	-	-	13
Boat Deckhand	\$77.03	\$43.72	\$33.31	-	-	-	-	-	-	-	-	-	13
<b>WATER WELL DRILLER:</b>	9/16/19												
Water Well Driller	\$46.40	\$35.00	\$11.40	-	-	-	-	-	-	-	-	-	
Water Well Driller Helper	\$32.38	\$22.00	\$10.38	-	-	-	-	-	-	-	-	-	
<b>WELDER:</b>													
Use wages of craft to which welding is incidental, except for Chain-Link Fence Erector. See remark.													10
<b>WINDOW FILM INSTALLER</b>	9/16/19												
	\$23.38	\$22.82	\$0.76	-	-	-	-	-	-	-	-	-	

Comments: Overtime must be paid at one and one-half times the basic hourly rate plus the hourly cost of required fringe benefits.

\* Indicates a wage, fringe benefit, remark, or title change from the previous bulletin.

## REMARKS:

1. Carpenter, Laborer (excluding High Scaler, Window Washer): \$.50 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
2. Cement Finisher, Mason, Plasterer, Terrazzo, Tile Setter: \$1.00 per hour shall be added to the regular straight-time rate for height pay for each hour while working from a bosun's chair and/or from a cable-suspended scaffold or work platform which is free swinging (not attached to building) for each hour worked on said rig.
3. Diver (Other than Aqua Lung), Stand-By Diver (Other than Aqua Lung):
  - A. On any dive exceeding 50 feet, the diver shall, in addition, be paid the following amount of "depth money":
 

50 feet to 100 feet	\$1.50 per foot in excess of 50 feet
100 feet to 150 feet	\$100.00 plus \$2.00 per foot in excess of 100 feet
150 feet to 200 feet	\$200.00 plus \$3.00 per foot in excess of 150 feet
  - B. When it is necessary for a Diver to enter any pipe, tunnel or other enclosure, the said Diver shall, in addition to the hourly rate, receive a premium in accordance with the following schedule for distance traveled from the entrance of the pipe, tunnel or other enclosure:
    - 1) When able to stand erect, but in which there is no vertical ascent:
 

5 feet to 50 feet	\$5.00 per day
50 feet to 100 feet	\$7.50 per day
100 feet to 150 feet	\$12.50 per day
Greater than 150 feet	The premium shall be increased an additional \$7.50 for each succeeding 50 feet.
    - 2) When unable to stand erect and in which there is no vertical ascent:
 

5 feet to 50 feet	\$5.00 per day
50 feet to 100 feet	\$7.50 per day
100 feet to 150 feet	\$12.50 per day
150 feet to 200 feet	\$36.75 per day
200 feet to 300 feet	\$1.00 per foot
300 feet to 450 feet	\$1.50 per foot
450 feet to 600 feet	\$2.50 per foot
4. Electrician:
  - A. One and one-half times the straight-time rate while working in a tunnel under construction; under water with aqualung equipment; in a completed tunnel which has only one entrance or exit providing access to safety and where no other personnel are working; or in an underground structure having no access to safety or where no other personnel are working.
  - B. Double the straight-time rate shall be paid for the following types of hazardous work regardless if fall prevention devices are used:
    - 1) While working from poles, trusses, stacks, towers, tanks, bosun's chairs, swinging or rolling scaffolds, supporting structures, and open platforms, over 70 feet from the ground where the employee is subject to a free fall; provided, however, that when work is performed on stacks, towers or permanent platforms where the employees are on a firm footing within an enclosure, a hazardous condition does not exist regardless of height;
    - 2) While working outside of a railing or enclosure, or temporary platforms extending outside of a building, or from scaffolding or ladder within an enclosure where an employee's footing is within one foot of the top of such railing, and the employee is subject to a free fall of over 70 feet;
    - 3) Working on buildings while leaning over the railing or edge of the building, and is subject to a free fall of 70 feet; or
    - 4) Two hours minimum hazardous pay per day shall be paid while climbing to a stack, tower or permanent platform which exceeds 70 feet from the ground but where the employee is on a firm footing within an enclosure.
  - C. Five percent per hour shall be added to the hourly wage for height pay while working above 9,000 feet elevation.

## REMARKS:

## 5. Equipment Operator:

- A. Operators and Assistants to Engineer (climbing a boom) of cranes (under 50 tons) with booms of eighty feet or more (including jib) or of cranes (under 50 tons) with leads of one hundred feet or more, shall receive additional premium according to the following schedule:

	Per Hour
Booms of 80 feet up to, or leads of 100 feet up to, but not including 130 feet	\$0.50
Booms and/or leads of 130 feet up to, but not including 180 feet	\$0.75
Booms and/or leads of 180 feet up to and including 250 feet	\$1.15
Booms and/or leads over 250 feet	\$1.50

Operators and Assistants to Engineer (climbing a boom) of cranes (50 tons and over) with booms of 180 feet or more (including jib) shall receive additional premium according to the following schedule:

	Per Hour
Booms of 180 feet up to and including 250 feet	\$1.25
Booms over 250 feet	\$1.75

Note: The boom shall be measured from the center of the heel pin to the center of the boom or jib point sheave.

- B. \$1.25 per hour shall be added to the hourly wage while operating a rig suspended by ropes or cables or to perform work on a Yo-Yo Cat.
- C. In a raise or shaft, a premium of \$.40 per hour will be paid in addition to the regular straight time wage.  
 A raise is defined to be an underground excavation (lined or unlined) whose length exceeds its width and the inclination of the grade from the excavation is greater than 20 degrees from the horizontal.  
 A shaft is defined to be an excavation (lined or unlined) made from the surface of the earth, generally vertical in nature, but may decline up to 75 degrees from the vertical, and whose depth is greater than 15 feet and its largest horizontal dimension. Includes an underground silo.
- D. In a tunnel, a premium of \$.30 per hour will be paid in addition to the regular straight time wages.  
 A tunnel is defined to be an underground excavation (lined or unlined) whose length exceeds its width and the inclination of the grade from the excavation is no greater than 20 degrees from the horizontal.
6. Glazier: \$1.00 per hour shall be added to the hourly wage for height pay for exterior glazing work performed in a walking/working surface with an unprotected side or edge 10 feet or more above a lower level which requires protection from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, position devise systems, fall restraint systems, perimeter safety cables or controlled decking zones.
7. Insulator: Six percent per hour shall be added to the hourly wage for hazardous pay while working from a boatswain chair, staging or free standing scaffolding erected from the ground up or mezzanine floor subject to a free fall and skyclimber suspended from a permanent structure and when working above 40 feet.
8. Ironworker: \$.50 per hour shall be added to the hourly wage while working in tunnels or coffer dams. \$1.00 per hour shall be added to the hourly wage while working under or covered with water (submerged), or on the summits of Mauna Kea, Mauna Loa or Haleakala.
9. Plumber: One and one-half times the straight-time rate for height pay while working from OSHA approved trusses, stacks, towers, tanks, bosun's chair, swinging or rolling scaffolding, supporting structures or on open platforms where the employee is subject to a direct fall of 40 feet or more. Provided, however, that when said work is performed where the employee is on a firm footing within an enclosure, a hazardous condition does not exist regardless of height. \$1.00 per hour shall be added to the straight-time rate while working with flame cutting or any type of welding equipment on any galvanized material or product for at least an hour.
10. Chain-Link Fence Erector: \$1.00 per hour shall be added to the hourly wage while performing welding services.
11. Water Front Construction: Clamshell or Dipper Operator: \$.50 per hour shall be added to the straight-time rate while working with boom (including jib) over 130 feet.
12. Possible wage/fringe option increases:  
 Carpenter, Drywall Installer, Lather: Effective WRS #498 - \$.025; 8/30/21 - \$.025; 9/5/22 - \$.050  
 Cement Finisher & Plasterer: Effective: WRS #498 - \$.030; 8/30/21 - \$.030; 9/5/22 - \$.030  
 Mason; Bricklayer, Cement Blocklayer; Stone Mason; Precast Sill Setter Pointer-Caulker-Weatherproofer: Effective WRS: #498 - \$.030; 8/30/21 - \$.030; 9/5/22 - \$.030  
 Painter: Effective WRS #498 - \$.065; 7/1/20 - \$.065; 1/1/21 - \$.050; 7/1/21 - \$.048  
 Roofer: Effective WRS #498 - \$.080; 9/5/21 - \$.080

## REMARKS:

13. Overtime/Holiday must be paid at one and one-half times the basic hourly rate, plus the hourly cost of required fringe, with the following exceptions:

A. Two times the basic hourly rate, plus the hourly cost of required fringe.

**Asphalt Paving:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Boilermaker:** Sunday, New Year's Day, President's Day, Memorial Day, Kamehameha Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Diver:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Electrician:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

**Elevator Constructor:** Saturday, Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Equipment Operator:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Floor Layer:** Labor Day.

**Glazier:** Sunday.

**Helicopter Worker:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Ironworker:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Plumber:** Sunday, New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Sheetmetal Worker:** Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Kamehameha Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

**Telecommunication:** Sunday, New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

**Truck Driver, except Concrete Mixer & Concrete Mixer/Booster:** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

**Water Front Construction (Dredging):** Sunday, New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Kamehameha Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

B. Three times the basic hourly wage, plus the hourly cost of required fringe on Labor Day.

Carpenter

Cement Finisher

Chain Link Fence Erector

Drywall Installer

Insulator

Laborer

Lather

Mason

Plasterer

Terrazzo

Tile Setter

Underground Laborer

## Attachment E

GENERAL PREVAILING RATE DETERMINATION MADE BY THE DIVISION OF INDUSTRIAL RELATIONS  
 PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 2, SECTIONS 1710, 1713 AND 1713.4  
 FOR COMMERCIAL BUILDING, SIGNAL, HEAVY CONSTRUCTION AND SPECIALIZED PROJECTS

LOCALITY: SAN FRANCISCO COUNTY  
 DETERMINATION: SFR-2019-3

EMPLOYEE CLASSIFICATION	EFFECTIVE DATE	DETERMINATION DATE	EMPLOYER PAYMENTS							STRAIGHT-TIME		OVERTIME HOURLY RATE			CONTRACT PROVISIONS		
			BASIC RATE	HEALTH AND WELFARE	PERSONAL	VACATION	PAID SICK	OTHER PAYMENTS	HOURS	TOTAL HOURLY RATE	DAY	SATURDAY	SUNDAY	HOLIDAYS	SCOPE	TRAVEL	PREDETERMINED
BROOKLAYER, BLOCKLAYER, STONE/MASON, PAINTER, CLEANER, CARPENTER, WATERPROOFER	8/22/2019	04/30/2020**	A 42,920	10,200	14,270	3,000	0.800	1,880	8.0	73,050	98,010	98,010	118,870	HOLIDAYS	SCOPE	TRAVEL	INCREASE
BROCK TENDER	8/22/2019	06/30/2020**	A 51,210	10,200	12,580	-	1,560	0,430	8.0	75,980	101,580	101,580	127,180	HOLIDAYS	SCOPE	TRAVEL	INCREASE
CARPENT, LINOLEUM,	8/22/2019	06/30/2020**	H 38,110	8,500	12,310	-	0,450	0,300	8.0	57,570	75,630	75,630	93,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SOFT FLOOR LAYER	2/22/2019	05/30/2019*	A 48,550	10,250	16,430	-	0,750	0,340	8.0	76,320	100,800	100,800	124,870	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
FLOOR COVERING HANDLER AFTER 3 YEARS	2/22/2019	06/30/2019*	A 24,250	10,250	8,220	-	0,050	0,340	8.0	43,110	55,240	55,240	67,360	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
FLOOR COVERING HANDLER LESS THAN 3 YEARS	2/22/2019	05/30/2019*	A 19,380	10,250	6,570	-	0,050	0,340	8.0	36,600	46,290	46,290	56,980	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
FLOOR COVERING HANDLER TRAMEE, FIRST 3 MONTHS	2/22/2019	06/30/2019*	A 15,500	10,250	5,280	-	0,050	0,340	8.0	31,400	38,150	38,150	46,900	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
FLOOR COVERING HANDLER TRAMEE, SECOND 3 MONTHS	2/22/2019	05/30/2019*	A 17,450	10,250	5,910	-	0,050	0,340	8.0	34,000	42,720	42,720	51,450	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
ELECTRICIAN:																	
COMM & SYSTEM INSTALLER	2/22/2019	11/30/2019*	40,520	11,050	8,900	-	1,100	0,280	8.0	61,250	82,210	82,210	103,180	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
COMM & SYSTEM TECH.	2/22/2019	11/30/2019*	48,800	11,050	8,900	-	1,100	0,280	8.0	67,540	91,850	91,850	115,770	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
INSIDE WIREMAN	8/22/2019	05/31/2020**	74,500	15,730	16,520	-	1,085	0,380	7.0	111,010	149,880	149,880	188,300	HOLIDAYS	SCOPE	TRAVEL	INCREASE
CABLE SPLICER	8/22/2019	05/31/2020**	83,810	15,730	16,520	-	1,085	0,380	7.0	120,670	164,150	164,150	207,620	HOLIDAYS	SCOPE	TRAVEL	INCREASE
FIELD SURVEYOR:																	
CHIEF OF PARTY	2/22/2019	02/28/2020**	45,030	13,880	11,510	4,330	1,120	0,210	8.0	78,080	98,600	98,600	121,110	HOLIDAYS	SCOPE	TRAVEL	INCREASE
INSTRUMENTMAN	2/22/2019	02/28/2020**	41,940	13,880	11,510	4,330	1,120	0,210	8.0	72,980	93,380	93,380	114,930	HOLIDAYS	SCOPE	TRAVEL	INCREASE
CHANNELROOMMAN	2/22/2019	02/28/2020**	39,080	13,880	11,510	4,330	1,120	0,210	8.0	70,110	90,540	90,540	109,170	HOLIDAYS	SCOPE	TRAVEL	INCREASE
GLAZIER	8/22/2019	12/31/2019**	A 50,570	10,250	18,050	-	0,800	0,380	8.0	80,050	105,330	105,330	130,620	HOLIDAYS	SCOPE	TRAVEL	INCREASE
AC MARBLE FINISHER	8/22/2019	07/31/2019*	AD 34,250	9,950	4,880	-	0,450	0,830	8.0	50,340	67,480	67,480	84,590	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
AC MARBLE MASON	8/22/2019	07/31/2019*	AD 47,030	9,950	16,040	-	0,800	1,080	8.0	74,910	98,430	98,430	121,940	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
PAINTER:																	
BRUSH AND SPRAY	2/22/2019	12/31/2019**	H 48,240	10,250	13,120	-	0,850	0,380	8.0	70,650	93,770	93,770	116,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
METALWORK AND THERMAL SPRAY	2/22/2019	12/31/2019**	H 49,240	10,250	13,120	-	0,850	0,380	8.0	73,650	96,270	96,270	122,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
INDUSTRIAL PAINTER	2/22/2019	12/31/2019**	H 47,480	10,250	13,120	-	0,850	0,380	8.0	71,900	95,850	95,850	119,380	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SANDBLASTER, STEAM CLEANER, WATERBLASTER	2/22/2019	12/31/2019**	H 46,740	10,250	13,120	-	0,850	0,380	8.0	71,150	94,520	94,520	117,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
EXOTIC MATERIALS	2/22/2019	12/31/2019**	H 46,990	10,250	13,120	-	0,850	0,380	8.0	71,400	94,800	94,800	118,380	HOLIDAYS	SCOPE	TRAVEL	INCREASE
PAPERHANGER, WALLCOVERING, LEAD ABATEMENT	2/22/2019	12/31/2019**	H 47,240	10,250	13,120	-	0,850	0,380	8.0	71,650	95,270	95,270	118,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
TAPER	2/22/2019	12/31/2019**	H 49,310	10,250	16,030	-	0,780	0,600	8.0	76,950	101,610	101,610	126,280	HOLIDAYS	SCOPE	TRAVEL	INCREASE
TAPER CLEAN-UP	2/22/2019	06/30/2019*	AL 18,010	10,150	-	-	-	-	8.0	28,160	37,170	37,170	46,170	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
PLASTERER	8/22/2019	06/30/2020**	AM 42,410	13,580	15,970	-	1,190	1,200	8.0	74,340	92,580	92,580	110,820	HOLIDAYS	SCOPE	TRAVEL	INCREASE
PLASTER TENDER	8/22/2019	06/30/2020**	AM 34,730	8,500	14,020	4,510	0,450	0,450	8.0	62,660	80,030	80,030	97,390	HOLIDAYS	SCOPE	TRAVEL	INCREASE
PLUMBER:																	
PLUMBER, STEAMFITTER, REFRIGERATION FITTER (RMAC)	8/22/2019	06/30/2020**	AD 74,150	16,580	20,830	-	3,800	AP 2,950	7.0	117,700	AD 154,780	AD 154,780	191,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
PLUMBING SERVICE AND REPAIR	8/22/2019	06/30/2020**	AD 53,040	15,840	18,050	-	2,100	AP 1,280	8.0	100,910	AD 132,430	AD 132,430	163,860	HOLIDAYS	SCOPE	TRAVEL	INCREASE
AIR CONDITIONING & REFRIGERATION/RMAC - SERVICE WORK	8/22/2019	06/30/2020**	AD 74,160	16,580	20,830	-	3,800	AP 2,550	8.0	117,700	AD 154,780	AD 154,780	191,880	HOLIDAYS	SCOPE	TRAVEL	INCREASE
LANDSCAPE/IRRIGATION PIPEFITTER	8/22/2019	06/30/2020**	A 63,040	15,840	13,090	-	1,360	0,790	8.0	84,720	128,240	128,240	157,780	HOLIDAYS	SCOPE	TRAVEL	INCREASE
UNDERGROUND/UTILITY PIPEFITTER	8/22/2019	06/30/2020**	A 63,040	15,840	13,090	-	1,360	0,790	8.0	84,720	128,240	128,240	157,780	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SPRINKLER FITTER (FIRE PROTECTION AND FIRE CONTROL SYSTEMS)	8/22/2019	12/31/2019**	A 65,520	11,470	18,800	-	1,600	0,550	8.0	88,740	E 131,500	E 131,500	164,280	HOLIDAYS	SCOPE	TRAVEL	INCREASE
ROOFER:																	
BITUMASTIC, ENAMELER, PIPE WRAPPER, COAL TAR PITCH BUILD-UP	8/22/2019	07/31/2020**	38,300	10,210	8,380	3,580	0,850	AN 0,550	8.0	61,870	AX 81,020	AX 81,020	100,170	HOLIDAYS	SCOPE	TRAVEL	INCREASE
MASTIC WORKER, KETTLEMAN (2 KETTLES WITHOUT PUMPS)	8/22/2019	07/31/2020**	48,300	10,210	8,380	3,580	0,850	AN 0,550	8.0	63,870	AX 84,020	AX 84,020	104,170	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SHEET METAL WORKER	8/22/2019	07/31/2020**	38,550	10,210	8,380	3,580	0,850	AN 0,550	8.0	62,120	AX 81,380	AX 81,380	100,570	HOLIDAYS	SCOPE	TRAVEL	INCREASE
TOTAL SHEET METAL CONTRACT OF \$200,000 OR LESS	8/22/2019	06/28/2020**	H 61,360	AY 14,800	AZ 29,440	-	1,530	0,710	7.0	107,840	BA 141,730	BA 141,730	175,820	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SERVICE MECHANIC (TOTAL SHEET METAL CONTRACT OF \$200,000 OR LESS)	8/22/2019	06/28/2020**	H 53,570	AY 14,800	AZ 27,950	-	1,530	0,710	8.0	98,480	BB 128,270	BB 128,270	158,080	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SHEET METAL CONTRACT OF \$200,000 OR LESS	8/22/2019	06/28/2020**	H 42,250	BC 14,000	AZ 15,480	-	1,430	0,710	8.0	73,870	BD 98,250	BD 98,250	118,620	HOLIDAYS	SCOPE	TRAVEL	INCREASE
SERVICE TECHNICIAN (TOTAL SHEET METAL CONTRACT OF \$200,000 OR LESS)	8/22/2019	06/28/2020**	H 38,040	BC 14,000	AZ 10,210	-	1,430	0,710	8.0	64,390	BD 84,210	BD 84,210	104,030	HOLIDAYS	SCOPE	TRAVEL	INCREASE
AIR CONDITIONING SPECIALIST (TOTAL SHEET METAL CONTRACT OF \$200,000 OR LESS)	8/22/2019	06/28/2020**	H 33,510	BC 14,000	AZ 4,870	-	1,410	0,710	8.0	54,500	BD 71,780	BD 71,780	89,050	HOLIDAYS	SCOPE	TRAVEL	INCREASE
AIR CONDITIONING JOURNEYMAN (TOTAL SHEET METAL CONTRACT OF \$200,000 OR LESS)	8/22/2019	06/28/2020**	H 39,280	AY 14,000	AZ 10,480	-	1,410	0,710	8.0	65,860	BD 85,280	BD 85,280	106,670	HOLIDAYS	SCOPE	TRAVEL	INCREASE
METAL DECK & SIDING	8/22/2019	06/30/2020**	H 42,330	AJ 14,580	BE 20,400	-	0,320	-	8.0	77,630	BB 98,780	BB 98,780	121,980	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
TERRAZZO FINISHER	8/22/2019	06/30/2019*	BM 38,180	9,950	5,740	-	0,600	0,920	8.0	53,590	BB 69,440	BB 69,440	85,280	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
TERRAZZO WORKER	8/22/2019	06/30/2019*	BM 45,900	9,950	15,040	-	0,800	1,110	8.0	72,800	BB 92,610	BB 92,610	112,620	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE



GENERAL PREVAILING WAGE DETERMINATION MADE BY THE DIRECTOR OF INDUSTRIAL RELATIONS  
PURSUANT TO CALIFORNIA LABOR CODE PART 7, CHAPTER 1, ARTICLE 3, SECTIONS 1770, 1772 AND 1773.4  
FOR COMMERCIAL BUILDING, HIGHWAY, HEAVY CONSTRUCTION AND DRILLING PROJECTS

LOCALITY: SAN FRANCISCO COUNTY  
DETERMINATION: SFR-2018-2

CRAFT (JOB/ENTRY LEVEL)	ISSUE DATE	EXPIRATION DATE	EMPLOYER PAYMENTS						STRAIGHT-TIME		OVERTIME HOURLY RATE			CONTRACT PROVISIONS			
			BASIC HOURLY RATE	HEALTH AND WELFARE	PENSION	VACATION	TRAINING	OTHER PAYMENTS	HOURS	TOTAL HOURLY RATE	DAILY	SATURDAY	SUNDAY AND HOLIDAY	HOLIDAYS	SCOPE OF WORK	TRAVEL & SUBSISTENCE	PREDETERMINED INCREASE
8 TILE FINISHER	8/22/2018	03/31/2020**	\$ 28,940	9,810	5,290	1,000	0,820	1,040	8.0	46,870	81,340	D 81,340	75,810	HOLIDAYS	SCOPE	TRAVEL	INCREASE
8 RED CIRCLED FINISHER	8/22/2018	03/31/2020**	\$ 34,820	9,810	6,040	1,500	0,820	1,110	8.0	54,100	71,510	D 71,510	66,820	HOLIDAYS	SCOPE	TRAVEL	INCREASE
8 TILE SETTER	8/22/2018	03/31/2020**	\$ 47,400	9,810	7,480	2,500	1,170	1,720	8.0	70,080	93,780	D 93,780	117,490	HOLIDAYS	SCOPE	TRAVEL	INCREASE
8 WATER WELL DRILLER	8/22/1998	12/31/1998*	12,700	3,200	0,780	0,530	-	-	8.0	17,310	23,660	23,660	23,660	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
8 PUMP INSTALLER	8/22/1998	12/31/1998*	12,700	3,200	0,780	0,530	-	-	8.0	17,310	23,660	23,660	23,660	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE
8 HELPER	2/22/2019	03/31/2019*	12,000	3,200	0,780	0,520	-	-	8.0	16,500	22,500	22,500	22,500	HOLIDAYS	SCOPE	TRAVEL	NO INCREASE